UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,926	11/06/2000	Rajashri Joshi	N0069US	8587

37583 7590 08/13/2008
NAVTEQ NORTH AMERICA, LLC
425 West RANDOLPH STREET
SUITE 1200, PATENT DEPT
CHICAGO, IL 60606

EXAMINER	
LE, MIRANDA	

ART UNIT	PAPER NUMBER
2167	

MAIL DATE	DELIVERY MODE
08/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** *09/706,926*	**Applicant(s)** JOSHI, RAJASHRI	
	Examiner MIRANDA LE	**Art Unit** 2167	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 July 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. [X] The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) [ ] The period for reply expires ______months from the mailing date of the final rejection.
   b) [X] The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. [ ] The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. [ ] The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) [ ] They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) [ ] They raise the issue of new matter (see NOTE below);
   (c) [ ] They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) [ ] They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. [ ] The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. [ ] Applicant's reply has overcome the following rejection(s): _____.
6. [ ] Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. [X] For purposes of appeal, the proposed amendment(s): a) [ ] will not be entered, or b) [X] will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1, 3-4, 6-27*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. [ ] The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. [ ] The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. [ ] The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. [X] The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. [ ] Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. [ ] Other: _____.

/Miranda Le/
Primary Examiner, Art Unit 2167

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments do not overcome the final office action
1. Claim 1
In response to Applicant's arguments with respect to "there is no way Eppler can disclose storing the wavelet coefficients in a computer-usable database on a physical storage medium, the coefficients being usable for displaying a representation of the geographic feature in the computer-based system", the Examiner respectfully disagrees.
Eppler recites:
"The landmarks stored in the landmark database 27 are each defined by geodetic coordinates of vertices of their perimeter. Preparation of the landmark database 27 employed in the reduced to practice embodiment of the system 20 and method 40 was done in two phases. Large areas were screened to identify appropriate features (i.e., lakes and islands) for landmarks. A list of names and center coordinates of more than 100 landmarks was generated for use in the system 20 and method 40. The exact geodetic coordinates (i.e., latitude, longitude, and height, given by θ, λ and H in FIG. 2) of points on the perimeter of each landmark were determined and stored in the database 27. The Common Mapping Toolkit (CMTK) geographic information system 27 was used to generate the landmark vertices comprising the perimeter (i.e. col. 4, lines 36-50)".
Thus, the coefficients limitation equates to θ, λ and H of Eppler, col. 4, lines 36-50. The θ, λ and H of Eppler are stored in the landmark database 27, col. 4, lines 36-50.
Eppler teaches the coefficients being usable for displaying (Figs. 3a-3f of Eppler) a representation of the geographic feature in the computer-based system in col. 3, line 59 to col. 4, line 2 (i.e. The ground equipment 12 comprises a computer system 16 that implements an image patch extraction algorithm 17, and includes an interactive image display 18 that an operator 19 may use to process images, and includes the present landmark position system 20, col. 3, line 59 to col. 4, line 2).
Eppler does not seem to explicitly teach "wavelet coefficients".
Donoho teaches wavelet coefficients (i.e. Wavelet coefficients, Summary);
Donoho teaches database to store wavelet coefficients or Ridgelet coefficients in a computer memory (i.e. Once an image (or other information) has been compressed using a Ridgelet transformation, the image or information can then be more efficiently stored in a computer memory, or can be more efficiently transmitted over a communications link, col. 14, lines 24-43).
Donoho teaches displaying (Figs. 8, 9, 10 of Donoho) geographic image (i.e. especially remotely sensed images from weather and other satellites, col. 1, lines 20-32) using wavelet coefficients, e.g. Ridgelet coefficients in Figs. 8, 9, and 10.
Both Eppler and Donoho are directed to the same field as using coefficients for displaying images.
Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the database of Eppler to store the wavelet coefficients of Donoho. One of ordinary skill in the art would be motivated to make this combination in order to compress an image using wavelet coefficients in view of Donoho (col. 14, lines 24-43), as doing so would give the added benefit of the image or information can then be more efficiently stored in a computer memory, or can be more efficiently transmitted over a communications link for displaying as taught by Donoho (col. 14, lines 24-43).

Furthermore, in response to Applicant's argument regarding "Eppler only discloses storing digitized images and boundary vertices…The only thing Eppler teaches is usable for display is the digitized images", it is noted that the claimed invention is directed to method and system for wavelet based representation and use of cartographic data, similarly, Eppler is directed to method for storing and displaying cartographic data as mentioned in the final office action and hereinabove. Furthermore, the combination of Eppler and Donoho teaches all the claimed limitations; plus, there is nothing in the claim language which prohibits the geographic feature is the digitized images.

2. Claims 8
In response to Applicant's arguments with respect to "both Eppler and Moon fail to teach retrieving from a computer-usable database a plurality of wavelet coefficients associated with the geographic feature", the Examiner respectfully points out that:
Eppler teaches the step of retrieving a plurality of coefficients associated with the geographic feature (i.e. the landmark positioning system 20 processes image patches and landmark data in the form of perimeter vertices from landmark database 27, col. 14, lines 39-51).
Eppler does not appear to explicitly teach "wavelet coefficients", Moon fairly teaches the Wavelet Transform on page 76.
Both Eppler and Moon are directed to the same field as using coefficients for displaying images.
Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the database of Eppler to store the wavelet coefficients of Moon. One of ordinary skill in the art would be motivated to make this combination in order to produce a representation which is intermediate between a spatial and a frequency representation in view of Moon (Abstract), as doing so would give the added benefit of enabling a representation to be viewed as a multi-resolution decomposition technique as taught by Moon (See Introduction, page 75).
It is noted that Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

For the reasons set forth above, claims 8, 11 are obvious in view of the combination of Eppler and Moon.

In response to Applicant's arguments with respect to "both Eppler and Moon fail to teach computing a function that represents the geographic feature using the retrieved wavelet coefficients and using the function to display the representation of the geographic feature", the Examiner respectfully traverses.
Eppler teaches the step of computing a function (See Functions in cols. 9 and 10 of Eppler) that represents the geographic feature using the retrieved coefficients and using the function to display (Figs. 3a-3f of Eppler) the representation of the geographic feature (i.e. the

landmark positioning system 20 processes image patches and landmark data in the form of perimeter vertices from landmark database 27, col. 14, lines 39-51).
Moon fairly teaches the exact function and the system of Moon has applications in cartography (pages 75-76) that represents the geographic feature using the retrieved wavelet coefficients (i.e. Wavelet coefficients, page 76) and using the function to display the representation of the geographic feature a plurality of wavelet coefficients.

3. Claim 11
In response to Applicant's arguments with respect to "both Eppler and Moon fail to teach a database storing a plurality of wavelet coefficients", the Examiner respectfully disagrees.
Eppler recites:
The landmarks stored in the landmark database 27 are each defined by geodetic coordinates of vertices of their perimeter. Preparation of the landmark database 27 employed in the reduced to practice embodiment of the system 20 and method 40 was done in two phases. Large areas were screened to identify appropriate features (i.e., lakes and islands) for landmarks. A list of names and center coordinates of more than 100 landmarks was generated for use in the system 20 and method 40. The exact geodetic coordinates (i.e., latitude, longitude, and height, given by θ, λ and H in FIG. 2) of points on the perimeter of each landmark were determined and stored in the database 27. The Common Mapping Toolkit (CMTK) geographic information system 27 was used to generate the landmark vertices comprising the perimeter (i.e. col. 4, lines 36-50).
Thus, the coefficients limitation equates to θ, λ and H of Eppler, col. 4, lines 36-50.
The θ, λ and H of Eppler are stored in the landmark database 27, col. 4, lines 36-50.
Eppler teaches the coefficients being usable for displaying (Figs. 3a-3f of Eppler) a representation of the geographic feature in the computer-based system in col. 3, line 59 to col. 4, line 2 (i.e. The ground equipment 12 comprises a computer system 16 that implements an image patch extraction algorithm 17, and includes an interactive image display 18 that an operator 19 may use to process images, and includes the present landmark position system 20, col. 3, line 59 to col. 4, line 2).
Eppler does not appear to explicitly teach "wavelet coefficients", Moon fairly teaches the Wavelet Transform on page 76.
Both Eppler and Moon are directed to the same field as using coefficients for displaying images.
Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the database of Eppler to store the wavelet coefficients of Moon. One of ordinary skill in the art would be motivated to make this combination in order to produce a representation which is intermediate between a spatial and a frequency representation in view of Moon (Abstract), as doing so would give the added benefit of enabling a representation to be viewed as a multi-resolution decomposition technique as taught by Moon (See Introduction, page 75).

In response to Applicant's arguments with respect to "both Eppler and Moon fail to teach a processor configured to calculate the representation of the geographic feature at a predetermined display scale using the wavelet coefficients associated with the predetermined display scale and a display device for displaying the representation of the geographic feature", the Examiner respectfully disagrees.
Eppler teaches a processor (Fig. 1) configured to calculate (See Functions in cols. 9 and 10 of Eppler; an image enhancement algorithm, col. 2, lines 39-49) the representation of the geographic feature at a predetermined display scale (i.e. pixel gray scale values, col. 2, lines 39-49) using the coefficients (i.e., latitude, longitude, and height, given by θ, λ and H in FIG. 2) associated with the predetermined display scale and a display device for displaying the representation of the geographic feature (Figs. 3a-3f of Eppler; the landmark mask and the upsampled image patch containing the landmark are processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, that is whether the each pixel is part of the landmark or part of the land or water surrounding the landmark. Using the image enhancement algorithm, the computed likelihood ratios along with the landmark mask are processed by the matching algorithms to generate the offset errors and match figure of merit, col. 2, lines 39-49).
Moon teaches the exact function to calculate the representation of the geographic feature at a predetermined display scale using the wavelet coefficients associated with the predetermined display scale and a display device for displaying the representation of the geographic feature. It has been brought to Applicant's attention that on page 75, Moon indicates that the system of Moon has applications in cartography.

4. Claim 13
In response Applicant's argument with respect to Eppler and Moon do not teach "storing the wavelet coefficients in the computer-usable database", the Examiner disagrees.
Eppler recites:
The landmarks stored in the landmark database 27 are each defined by geodetic coordinates of vertices of their perimeter. Preparation of the landmark database 27 employed in the reduced to practice embodiment of the system 20 and method 40 was done in two phases. Large areas were screened to identify appropriate features (i.e., lakes and islands) for landmarks. A list of names and center coordinates of more than 100 landmarks was generated for use in the system 20 and method 40. The exact geodetic coordinates (i.e., latitude, longitude, and height, given by θ, λ and H in FIG. 2) of points on the perimeter of each landmark were determined and stored in the database 27. The Common Mapping Toolkit (CMTK) geographic information system 27 was used to generate the landmark vertices comprising the perimeter (i.e. col. 4, lines 36-50).
The coefficients limitation equates to θ, λ and H of Eppler, col. 4, lines 36-50.
The θ, λ and H of Eppler are stored in the landmark database 27, col. 4, lines 36-50.
Eppler teaches the coefficients being usable for displaying (Figs. 3a-3f of Eppler) a representation of the geographic feature in the computer-based system in col. 3, line 59 to col. 4, line 2 (i.e. The ground equipment 12 comprises a computer system 16 that implements an image patch extraction algorithm 17, and includes an interactive image display 18 that an operator 19 may use to process images, and includes the present landmark position system 20, col. 3, line 59 to col. 4, line 2).
Eppler does not appear to explicitly teach "wavelet coefficients", Moon fairly teaches the Wavelet Transform on page 76.
Both Eppler and Moon are directed to the same field as using coefficients for displaying images.
Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the database of Eppler to store the wavelet coefficients of Moon. One of ordinary skill in the art would be

motivated to make this combination in order to produce a representation which is intermediate between a spatial and a frequency representation in view of Moon (Abstract), as doing so would give the added benefit of enabling a representation to be viewed as a multi-resolution decomposition technique as taught by Moon (See Introduction, page 75).

5. Claim 16
In response Applicant's argument with respect to Eppler and Moon do not teach "a second computer-usable on a physical storage medium, operatively coupled to the processor, for storing the wavelet coefficients", the Examiner disagrees.
Eppler teaches that the images can be transmitted over networks or other link, hence, the destination computer system is a second computer-usable on a physical storage medium storing coefficients (i.e. there has been a very rapid increase in the amount of information stored as images, especially remotely sensed images from weather and other satellites, and medical images such as CAT scans, magnetic resonance images, and mammograms. A pixel representation of an image is a very inefficient representation due to the redundancies in the image. These images must typically be remotely accessible by Doctors and other individuals, and thus, must be transmitted over networks or other links. If the image can be more efficiently represented, the image can be stored using less memory and can be more quickly transmitted over a data or computer network or over a transmission link, etc. in less time or transmitted using less bandwidth, col. 1, lines 20-32).

6. Claim 20
In response Applicant's argument with respect to Eppler and Moon do not teach "generating the database error metric based on a wavelet transform involving the first and second pluralities of wavelet coefficients, wherein said database error metric provides a measurement comparing said first cartographic database and said second cartographic database", the Examiner respectfully disagrees.
the database error metric equates to pixel offset error of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).
second cartographic database equates to the predicted position of the landmark of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).
first cartographic database equates to actual position of the landmark of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).

7. Claim 24
In response Applicant's argument with respect to Eppler and Moon do not teach "the processor generating a database error metric based on the first and second pluralities of wavelet coefficients, wherein said database error metric provides a measurement comparing said first cartographic database and said second cartographic database", the Examiner respectfully notes that:
a measurement comparing equates to pixel offset error of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).
second cartographic database equates to the predicted position of the landmark of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).
first cartographic database equates to actual position of the landmark of Eppler, See Abstract (i.e. The landmark mask and the upsampled image patch are then processed by one or more matching algorithms to generate line and pixel offset error values indicative of the offset between the predicted position of the landmark and the actual position of the landmark in the image. A match figure of merit is also generated that is indicative of the reliability and accuracy of the computed offset. Optionally, the upsampled image patch is processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, Abstract).
Therefore, contrary to Applicant's assertion, Eppler, as combined and modified, does teach the claimed limitations.

8. Dependent claims 6, 19
In response Applicant's argument with respect to Eppler does not teach computing the wavelet coefficients by performing a least squares fit, the Examiner notes that:
Eppler, as modified, teaches the step of generating coefficients using a least-squares fit, col. 5, lines 65 to col. 6, line 22 (i.e. The orbit and

attitude determination (OAD) solution is obtained by a least-squares fit of landmarks measured on previous images frames, col. 5, line 65 to col. 6, line 22).
Note that Donoho also teaches computing the wavelet coefficients limitation as the step to generate Wavelet coefficients (i.e. A Wavelet transform is performed on values derived from the frequency domain values provided in digital polar coordinates to generate Wavelet coefficients (or Ridgelet coefficients), Summary).
Therefore, it would modify the step of generating Wavelet coefficients of Donoho by applying a least-squares fit of Eppler to provide the step of computing the wavelet coefficients by performing a least squares fit to one of ordinary skill of the art. One of ordinary skill in the art would be motivated to make this combination in order to compress an image using Wavelet coefficients in view of Donoho (col. 14, lines 24-43), as doing so would give the added benefit of the image or information can then be more efficiently stored in a computer memory, or can be more efficiently transmitted over a communications link for displaying as taught by Donoho (col. 14, lines 24-43).

9. Dependent claim 9
In response to Applicant's arguments regarding Eppler and Moon does not teach performing a zooming operation, the Examiner respectfully points out that "zoom" means to enlarge and display greater detail of a portion of a geographic data set, or to adjust the scale of a display, or to electronically enlarging or reducing the size of an image. Thus, Eppler similarly teaches performing a zooming operation as a Digital Chart of the World map with 1:1,000,000 scale; a ADRG map with 1:250,000 scale, (col. 15, line 48 to col. 16, line 8).

Dependent claims 3-4, 6-7, 9-10, 12, 14-15, 17-19, 21-23, 25-27 are dependent upon their base claims are therefore not allowable for the reasons set forth above.

Accordingly, Applicant's arguments have been fully considered but they are not persuasive. .